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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,597	10/27/2003	Osamu Sekiguchi	27391/US589	3511

4743 7590 03/22/2006

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EXAMINER

LEADER, WILLIAM T

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.







### **DETAILED ACTION**

1. Receipt of the papers filed on January 18, 2006, is acknowledged. Claims 1-7 are pending.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

3. Claims 1 and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mooij et al (5,861,091) in view of Bard et al (*Electrochemical Methods*) and further in view of applicant's admitted prior art for the reasons given in the previous office action and in view of the following comments.
4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mooij et al in view of Bard et al as applied to claim 1 above, and further in view of Holland (1,11,967) for the reasons given in the previous office action and in view of the following comments.
5. Applicant's Remarks have been carefully considered but are not deemed to be persuasive. At page 4 of the Remarks, applicant argues that the process of the invention cannot be inferred from the general disclosure of Bard et al that the mass transfer such as convection will have an effect on the electrolytic cells. This argument is not persuasive. Bard clearly indicates that convection has an effect on mass transfer. One of ordinary skill in the art would have recognized that increased convection would have resulted in increased mass transfer, as the movement would have carried away the ions forming near the surface of the electrode. This would suggest



movement such as stirring in the process of Mooij et al. At page 5 of the Remarks applicant states that it has been unexpectedly found that a mechanical method as defined in claim 1 of accelerating the dissolution of zinc ions is very effective as compared to conventional methods. Applicant refers to the working example of this invention and the comparative examples. However, a showing of unexpected results must be commensurate in scope with the claimed subject matter. For example, the examples all use a particular source of zinc ions, a particular zinc dissolution accelerating metal, and particular concentrations of the plating solution constituents. None of these parameters is recited in the claims

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Lowenheim text Electroplating discusses mass transport and states that convection involves the movement of substantial quantities of the solution relative to the electrodes. The electrodes may move, the solution may move, or both. Thus, Lowenheim clearly recognizes that moving the electrodes increases mass transport. See page 139.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,




Art Unit: 1742

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William T. Leader whose telephone number is 571-272-1245. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
William Leader  
March 16, 2006

  
**ROY KING**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1700**